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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,948	12/12/2003	Jong Kil	A03P1079	3699
36802	7590	10/23/2007		
PACESETTER, INC. 15900 VALLEY VIEW COURT SYLMAR, CA 91392-9221			EXAMINER HOLMES, REX R	
			ART UNIT	PAPER NUMBER
			3762	
			MAIL DATE	DELIVERY MODE
			10/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/735,948

Applicant(s)

KIL ET AL.

Examiner

Rex Holmes

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/18/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2 and 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 3 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/28/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/18/07 have been fully considered but they are not persuasive. Applicant argues that the system of Kroll utilizes multiple signal to emulate the surface EKGs and thus does not concatenate separate portions of cardiac signal having a first emulated portion formed by a portion of a first cardiac signal and a second emulated portion formed by a portion of a second cardiac signal. The Examiner respectfully disagrees as the Applicant drafted the claim in a comprising format, an open ended claim, and thus the claim does not preclude the use other cardiac signals to create an emulated EKG. Kroll discloses a system that senses separate cardiac signals and then selectively concatenates the portions to yield an emulated signal. Although that signal is created using multiple signals, there is a portion created for a first signal and a portion created from a second signal.

2. The Applicant further argues that Kroll and Hedberg do not concatenate the signals. Concatenate taken in its broadest reasonable interpretation means to join or to link together, Hedberg and Kroll do that by linking and joining together multiple signals to create an emulated surface EKG signal. Further the claim is a comprising claim and does not preclude the use of Adding or using BOTH signals for the first link and BOTH signals for the second link.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2 and 9-16 stand rejected under 35 U.S.C. 102(e) as being anticipated by Kroll et al. (U.S. Pat. 6,813,850 hereinafter "Kroll").

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

5. Regarding claims 1-2, 14-16, Kroll discloses a system for emulating a surface EKG using an implantable device (ABSTRACT). Kroll also discloses that it converts the internal signals that it receives from the electrodes into an emulated surface EKG (Col. 11, ll. 4-9). Kroll further discloses that it senses atrial and ventricular signals (Col. 8, ll. 50-56). Kroll further discloses that the device or an external device can perform the emulation (Col. 4 ll. 44-47).

6. Regarding claims 9-10, Kroll discloses sensing in unipolar for both atrial and ventricular signals (Col. 9, ll. 29-33). Kroll further discloses an atrial ring and tip electrode, a ventricular tip and ring electrode and a SVC and RV Coil electrode (Fig. 2).

7. Regarding claims 11-12, Kroll discloses that the signals can be filtered separately or together to form a combined surface EKG signal (Col. 4, ll. 47-56). Kroll further discloses that a switch that is selectably controlled determines sensing polarity and thus the signal polarity (Col. 10, ll. 48-52).

8. Regarding claim 13, Kroll discloses using the emulated EKG to control the delivery of therapy for the device (Col. 5, ll. 9-12).

9. Claims 1-2, 9-16 stand rejected under 35 U.S.C. 102(b) as being anticipated by Hedberg et al (U.S. 5740811).

10. Referring to claims 1, 2, and 15-16, Hedberg et al. teach a method and apparatus that comprises an implantable cardiac stimulation device having an atrial and ventricular electrode and sensing atrial and ventricular signals. The signals are combined and a surface ECG is obtained in an extracorporeal signal processing device (see column 2, lines 55-67 and column 3, lines 1-5 and column 4, lines 40-49 and figure 1). While Hedberg et al. do not explicitly state that the device and method concatenate the atrial and ventricular signals, the Examiner is considering the definition of concatenating to be the joining of two strings or linking together. Regarding claim 9, Hedberg et al. teach sensing atrial and ventricular signals using unipolar sensing by employing the electrodes in combination with the housing of the device (see column 4, lines 40-49). With regards to claim 10, Hedberg et al. teach a right atrial tip electrode and a right ventricular tip electrode (see figure 1 and column 4, lines 40-42 and lines 52-53). With reference to claim 11, Hedberg et al. teach that local noise is filtered out of the signals (see column 5, lines 27-29 and lines 46-48), and referring to claim 12,

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Hedberg et al. teach combining by addition signals received from different electrodes (see column 6, lines 54-57). Regarding claim 13, also teaches using the emulated EKG to adjust parameters controlling the implant (see column 2, lines 13-22). Regarding claim 14, Hedberg et al. teach that the components that generate the synthesized ECG can be completely contained within an implantable unit (see column 2, lines 65-67 and column 3, line 1).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rex Holmes whose telephone number is 571-272-8827. The examiner can normally be reached on M-F 8:00 - 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Rex Holmes
Examiner
Art Unit 3762



George Evanisko
Primary Examiner
Art Unit 3762

9/26/17